



Soluzione GPS combinata degli spostamenti cosismici e stima preliminare dei parametri di sorgente

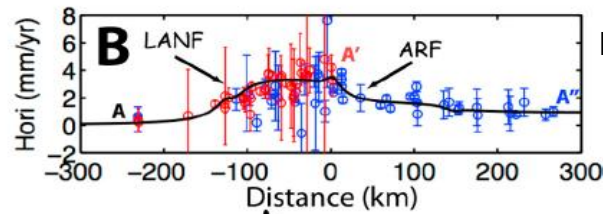
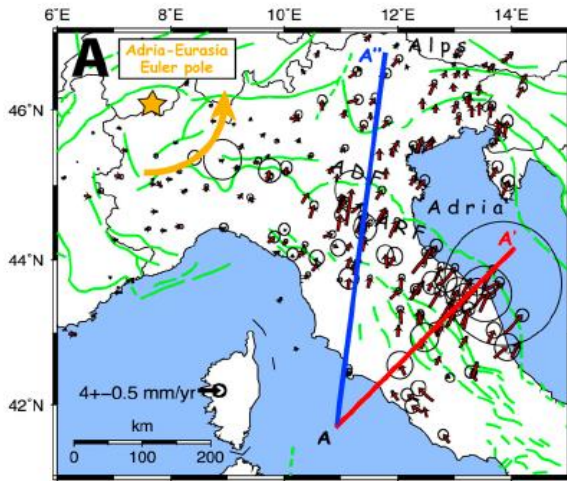
Terremoto Emilia 2012

Roberto Devoti ^(*), Valentina Cannelli^(**), Daniele Melini^(**)

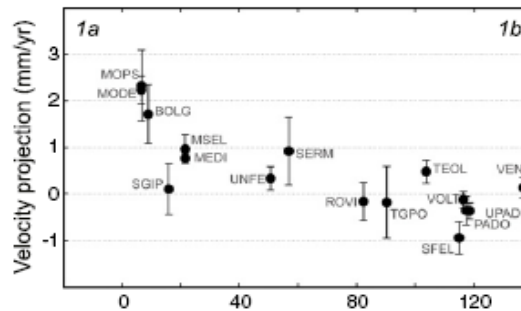
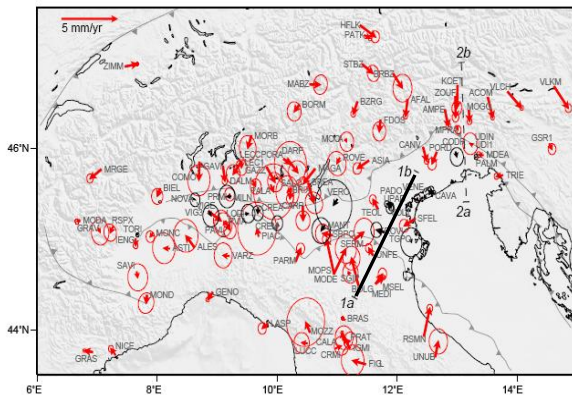
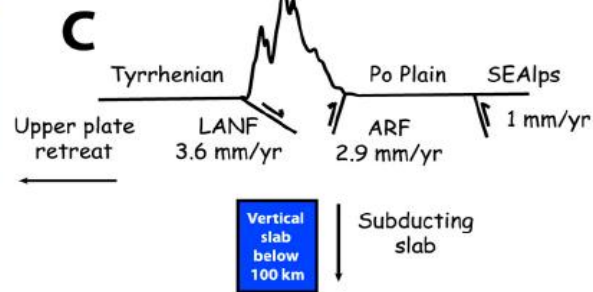
(*) INGV – Centro Nazionale Terremoti, Roma.

(**) INGV – Sismologia e Tettonofisica (Roma1), Roma.

Active deformation in the literature



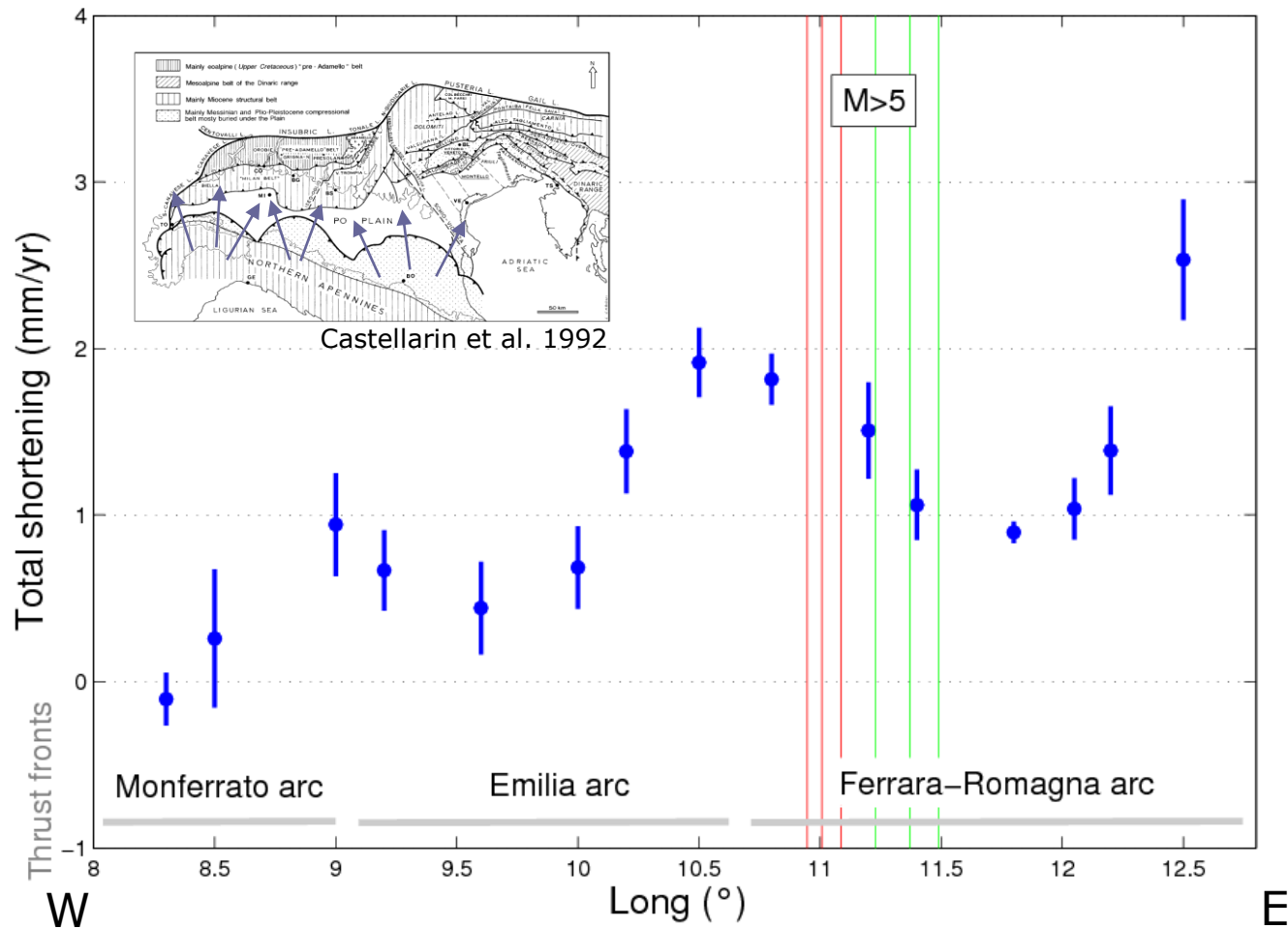
Bennett et al. 2012



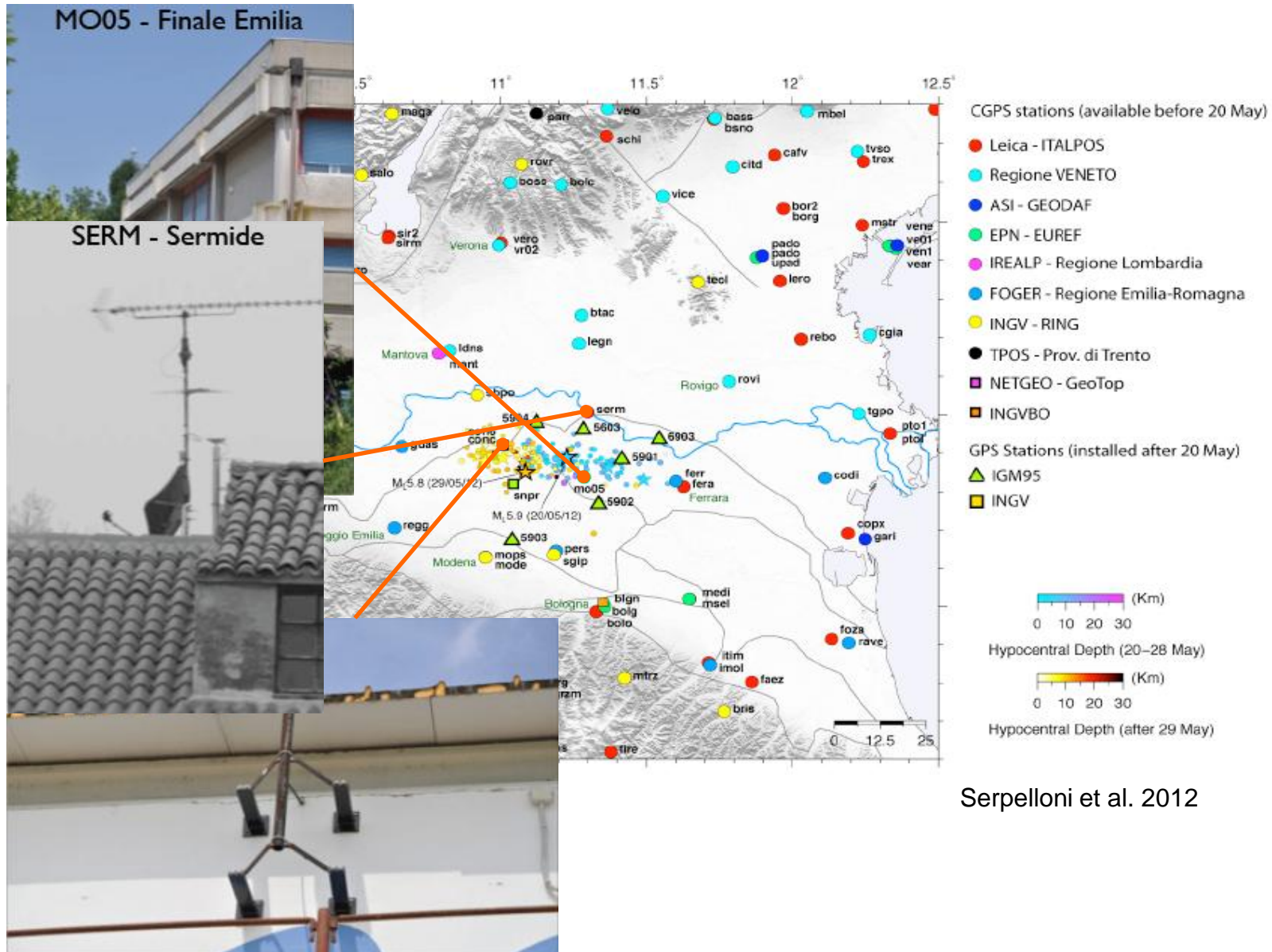
Devoti et al. 2011

Strain-rates are low, active shortening is localized along the Apennine front (1-2 mm/yr)

Total shortening across the outer front of the Apennines thrusts

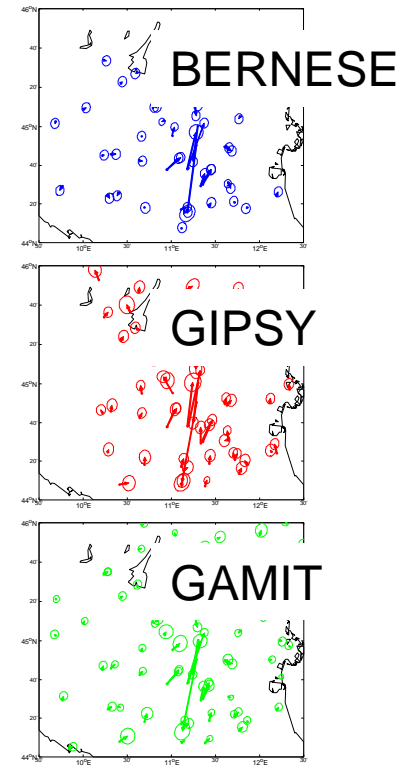
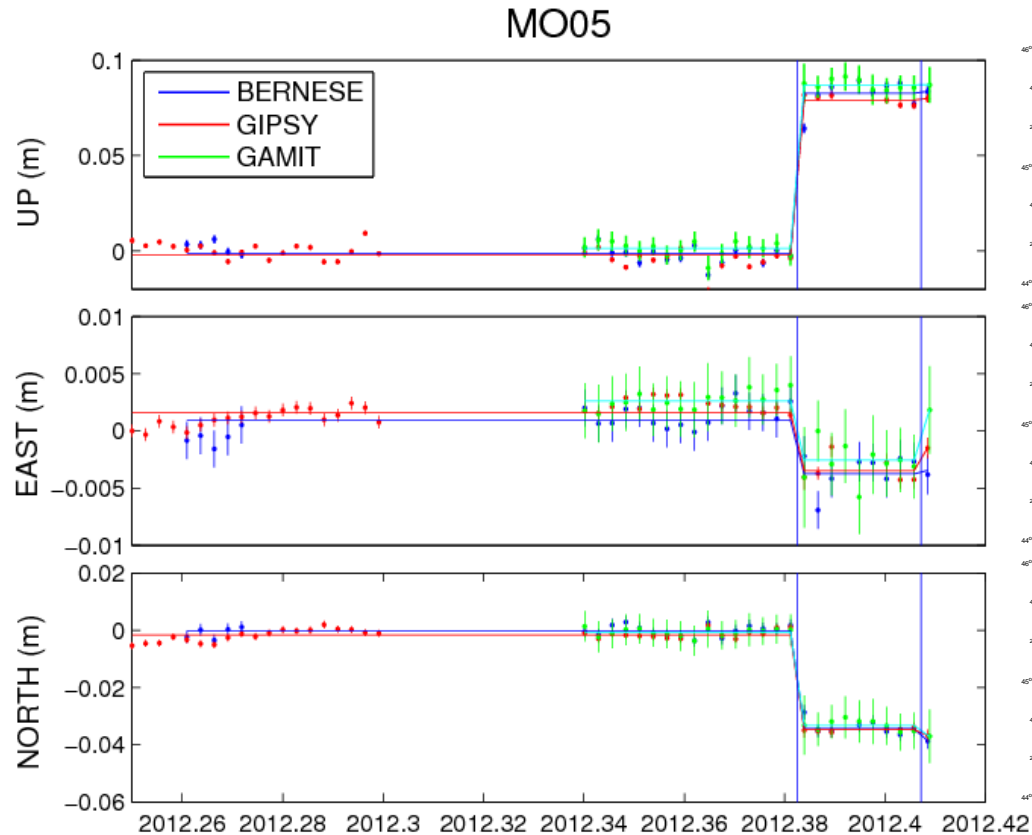


GPS networks in the Po plain region



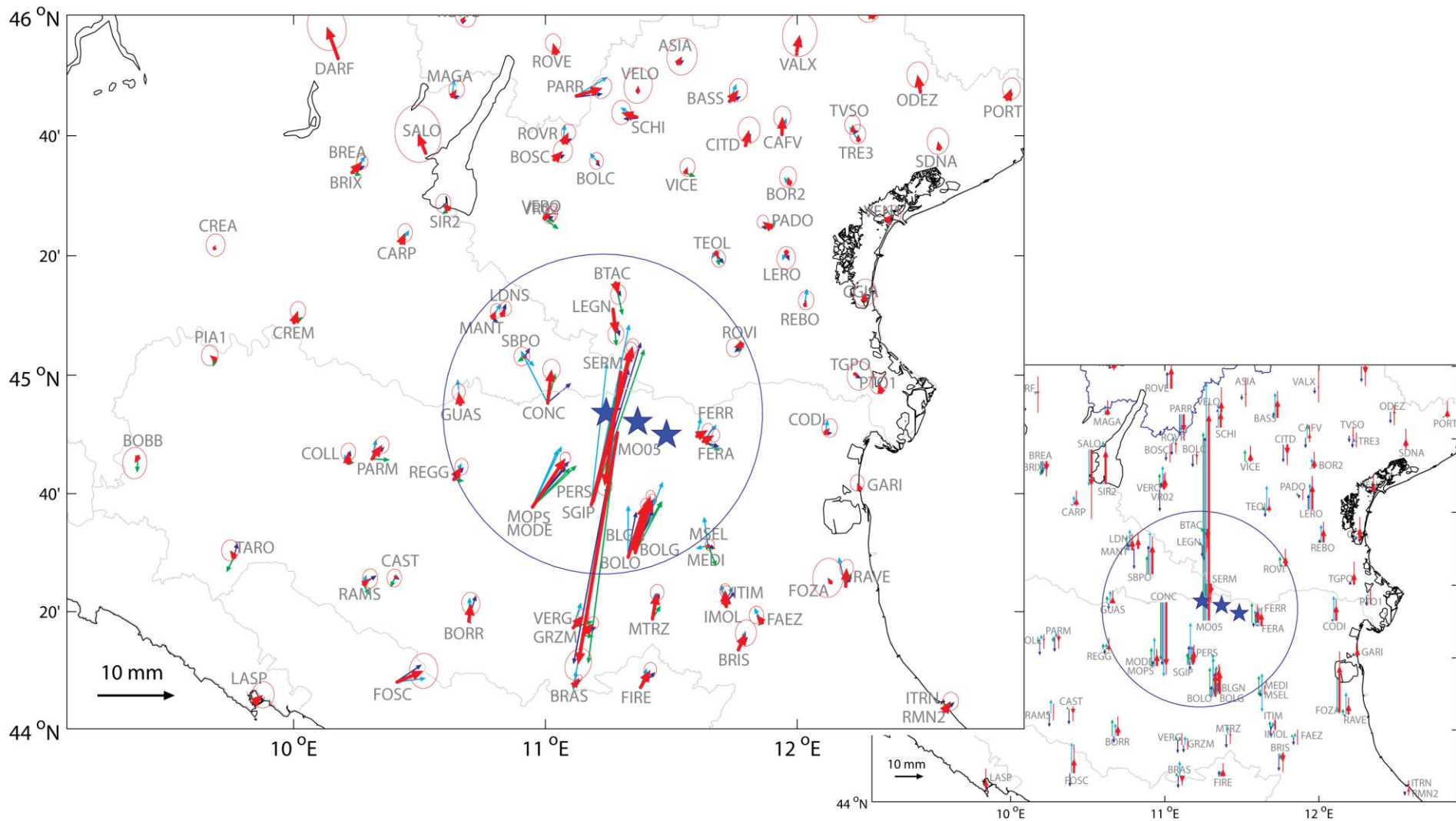
GPS data analysis and offsets combination

Three distinct analysis

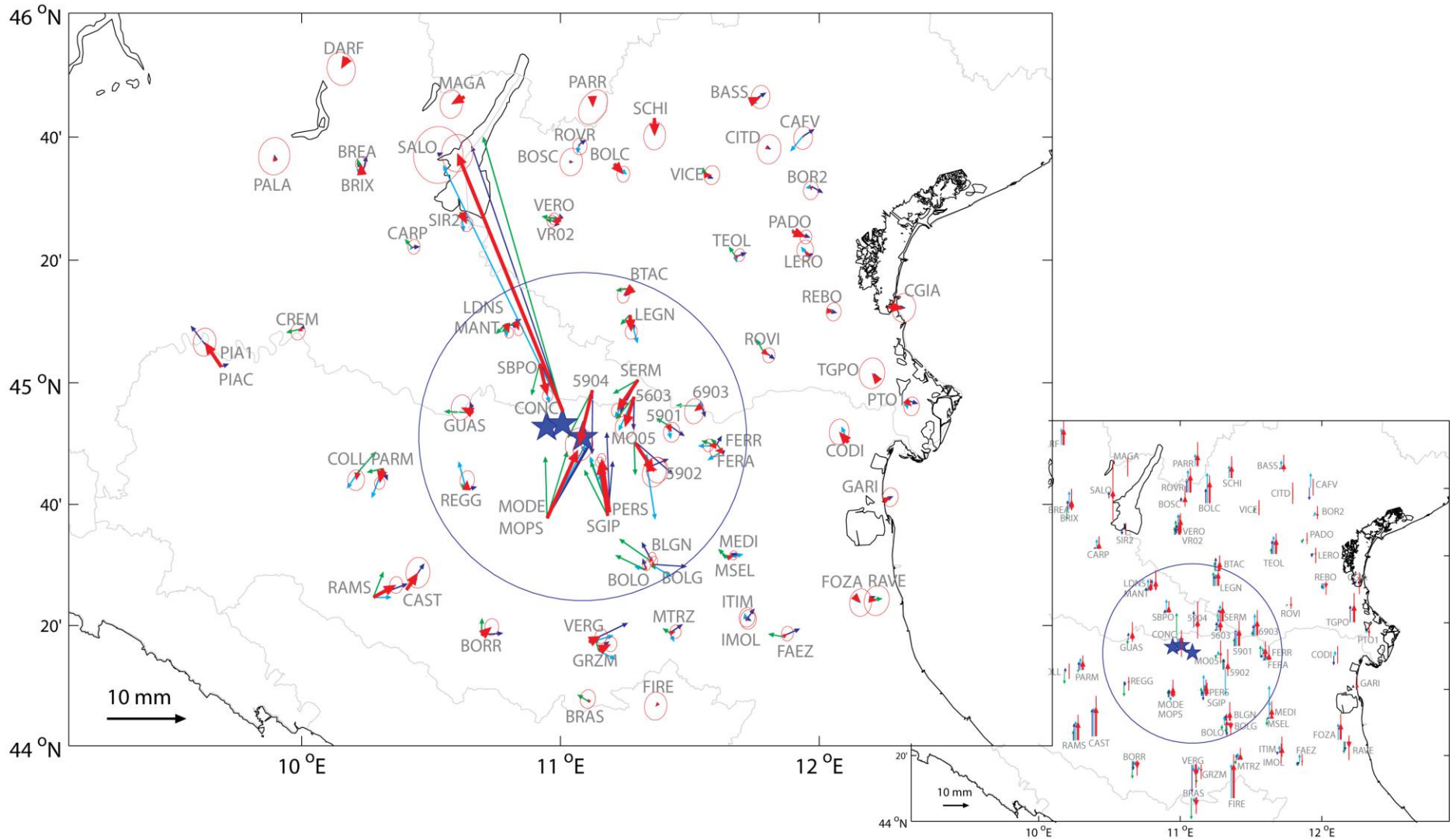


Least
squares
combination

Coseismic offsets (May 20th, 2012)

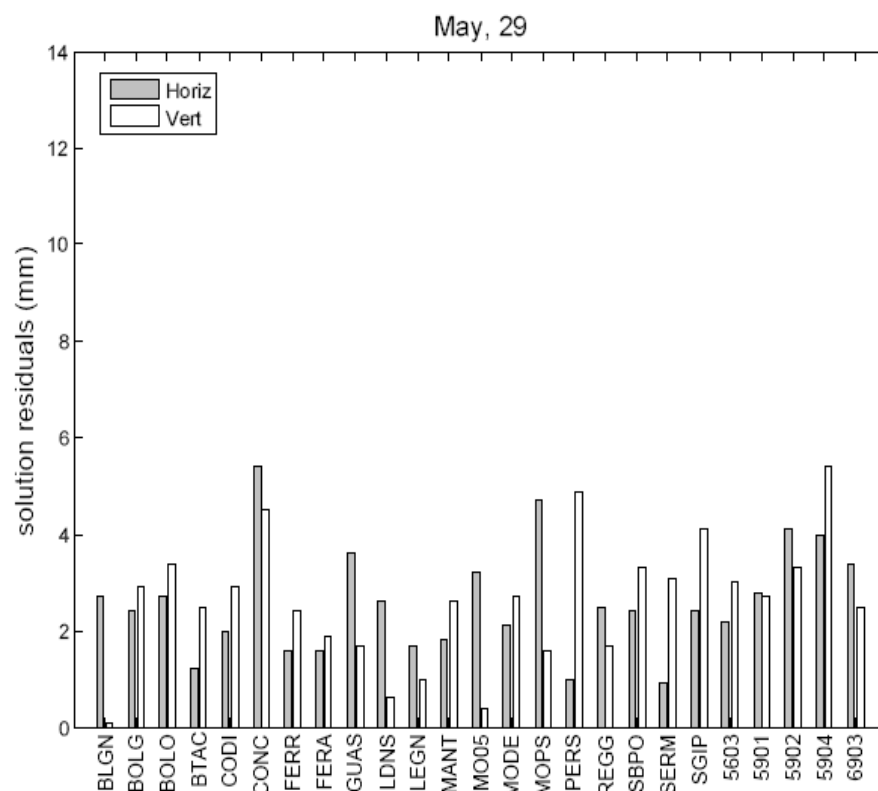
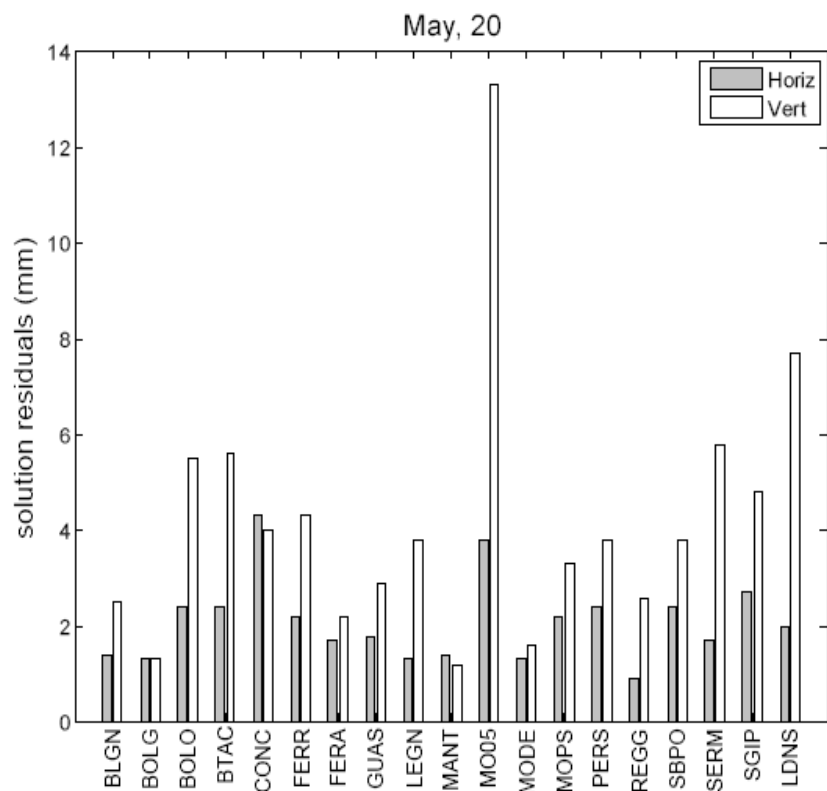


Coseismic offsets (May 29th, 2012)



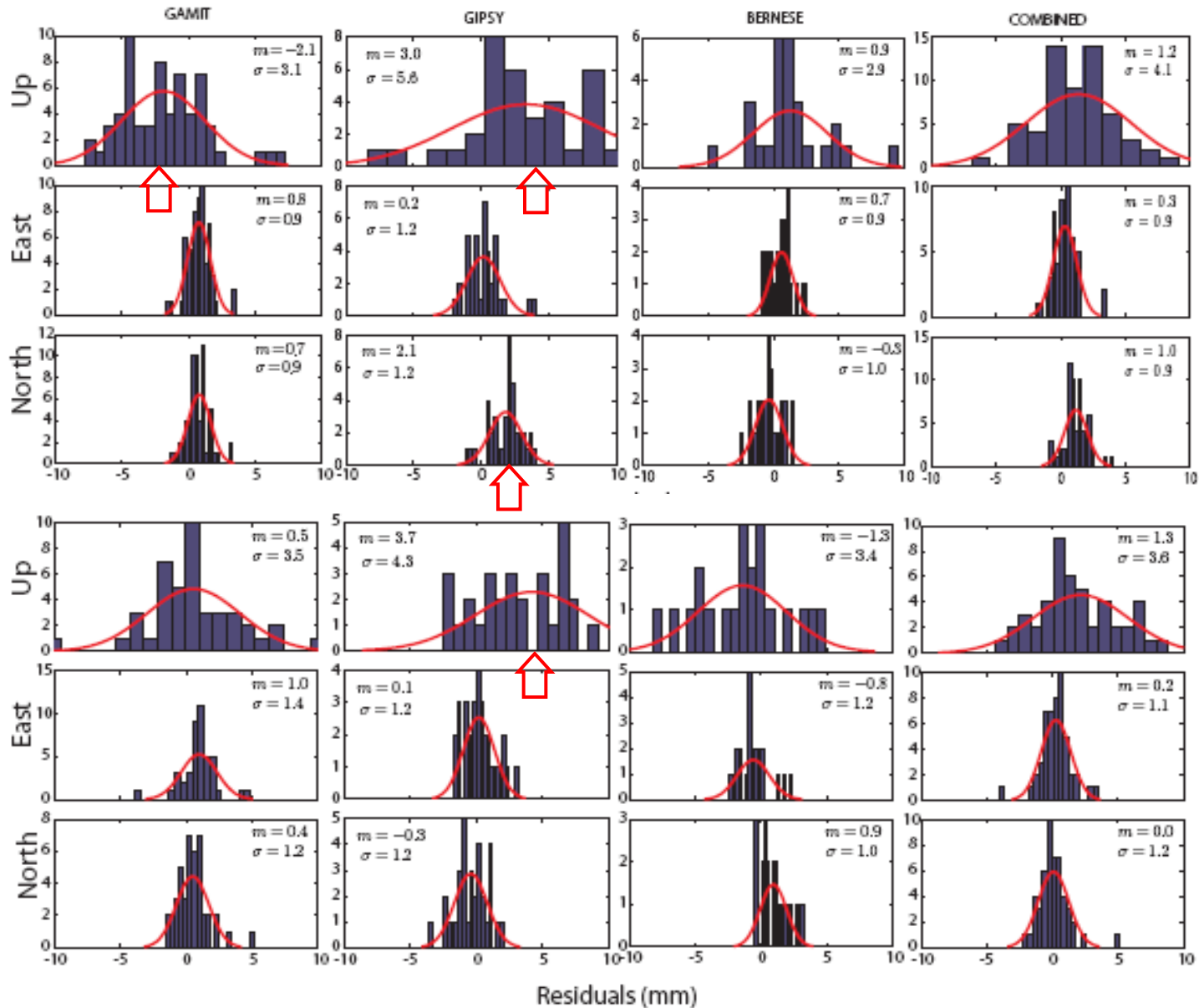
Offset Repeatability

wrms of differences between individual offsets



Systematic errors in the individual solutions

far-field residuals



Spunti per la discussione

intersismico

Ricerca
individuale

Miglioramento della copertura delle reti *geodetiche* GPS, soprattutto nelle regioni pedemontane della pianura Padana

Archivio dei caposaldi esistenti e loro misurazione periodica

Attivazione di procedure cooperative per la stima di prodotti geodetici di consenso (campo di spostamento cosismico, serie storiche, deformazione, ecc.)

Infrastrutture
&
Servizi

Tempo reale: stima dello spostamento cosismico GPS entro i primi 10 min dal terremoto.

cosismico